PUTTING THE MUTUAL BACK INTO AN AUTOMATIC AID AGREEMENT

EXECUTIVE PLANNING

BY: Jack Cooley
Roseburg Fire Department
Roseburg, Oregon

An applied research project submitted to the National Fire Academy
as part of the Executive Fire Officer Program

February 2003

ABSTRACT

The problem was that changes in operations in both the Roseburg Fire Department and Douglas County Fire District No. 2 have resulted in difficulties with the automatic aid agreement, and have created a need to re-examine its operational effectiveness and adjust it. The purpose of this research was threefold: (1) To identify the operational changes and the impact they have had on the current automatic aid agreement, (2) to determine if an automatic aid agreement remained a viable option to the departments, and (3) to identify equitable and reciprocal solutions to current operational needs. Historical and descriptive research methodologies were utilized to answer the following questions.

1. What changes have occurred within both organizations and how have they impacted the automatic aid agreement?

2. Does an automatic aid agreement continue to be a viable option for the two departments?

3. What options are available in making an automatic aid agreement both reciprocal and equitable?

The research targeted textbooks and trade journals containing automatic and mutual aid and was initiated at the Learning Resource Center and continued in Roseburg, Oregon. Nineteen Oregon fire departments were surveyed to determine automatic aid viability, the extent and bases for its use, types of functional consolidation, and the perceptions of equitability and the means by which it is accomplished.

The results of the research analysis concurred with the survey in identifying the expanding use and benefits of automatic aid; the importance of planning, maintaining, and practicing an agreement through well defined written expectations and responsibilities; and

cooperative efforts. Multiple solutions to equitability were identified and determined to be dependent upon the scope and degree of the automatic aid agreement.

Recommendations included revisiting the 1996 automatic aid *final draft* agreement and renegotiate a cooperative agreement based on an analysis of joint resources and operational need.

TABLE OF CONTENTS

INTRODUCTION

Author Lewis Carroll wrote in his book, *Alice's Adventures in Wonderland.* "Alice said, 'Would you please tell me which way to go from here?' The cat said, 'That depends on where you want to get to.'"

Dating back to 1950, The Roseburg Fire Department began a long history of mutual aid with other agencies throughout Douglas County. The importance of mutual aid was magnified during the great Roseburg blast of 1959 which resulted in a surge of mutual aid agreements that includes over 35 departments today. In 1975, the Roseburg Fire Department entered into its first automatic mutual aid agreement with the surrounding fire district, Douglas County Fire District No. 2. Since its inception, this automatic aid agreement has been *on again, off again* due to operational changes between the departments. The problem is that changes in operations in both the Roseburg Fire Department and Douglas County Fire District No. 2 have resulted in difficulties with the automatic aid agreement, and have created a need to re-examine its operational effectiveness and adjust it.

The purpose of this research is three fold: (1)To identify the operational changes and the impact they have had on the current automatic aid agreement, (2) to determine if an automatic aid agreement continues a viable option to the departments, and (3) to identify equitable and reciprocal solutions to current operational needs. Historical and descriptive research methodologies will be utilized to answer the following questions.

1. What changes have occurred within both organizations and how have they impacted the automatic aid agreement?

2. Does an automatic aid agreement continue to be a viable option for the two departments?

3. What options are available in making an automatic aid agreement both reciprocal and equitable?

BACKGROUND AND SIGNIFICANCE

Present

The Roseburg Fire Department (RFD) is a full-paid department with a staff of 32. The department provides fire suppression, basic and advanced life support emergency medical services, hazardous materials response, code enforcement, fire investigation and public education. These services are provided from three fire stations. The annual operating budget for the fire department is $3 million from a citywide budget of $43.7 million. The corporate limits of Roseburg encompass 9.43 square miles, within which reside some 21,000 residents. It serves an urban growth area of nearly 60,000 persons. Roseburg is the county seat and business center of Douglas County, resulting in a population increase ranging from approximately 50,000 to 70,000 during the working day. Roseburg has a manager-council form of government (City of Roseburg, 2002a). The three fire stations and the number of personnel from which the RFD operates have not changed for over 34 years, while the city has grown and expanded its boundaries around them. Additionally, emergency responses have increased over 10-fold during this period, from 318 alarms in 1968 to 3,573 in 2002 (Roseburg Fire, 2003a).

Douglas County Fire District No. 2 (DCFD No. 2) surrounds the City of Roseburg. It serves 84 square miles and provides similar services to its businesses and 34,000 residents. To further illustrate this, the City of Roseburg is to the donut hole as DCFD No. 2 is to the donut.

Past

According to Leroy Seibold, past City of Roseburg Fire Chief and Firefighter from 1955-1984, (personal communication, October 17, 2002), DCFD No. 2 was established in 1952 by a handful of City of Roseburg firefighters filling a need to provide fire protection to areas surrounding the city. This was the beginning of a close working relationship between the two departments which was not without its rivalries. DCFD No. 2 expanded to four fire stations that were situated to have a response time of approximately seven minutes to the Roseburg city limits. Its fire station headquarters were located in the middle of the fire district, on the city boundary. The outer four fire stations were situated on the perimeter of the fire district.

The City of Roseburg was incorporated in 1882, and its fire department formed the following year. In its beginning, the Umpqua Hose Company No. 1, as it was then known, consisted of a volunteer force. As the City of Roseburg grew, so did the number of fire stations and career personnel. The fire department eventually consisted of a combination force of both paid-career and volunteer firefighters. Fighting fires then (as it does now) required all available resources the department had to offer. An early solution for Roseburg in addressing its resource problem was found in the formation of mutual aid. For fire service organizations, Lavote (1996) defined mutual aid as "an agreement entered into by jurisdictions to provide for services, resources and facilities when local resources prove to be inadequate to cope with a given situation."(p. 95). Lavote explained mutual aid further by stating that, "mutual aid agreements are usually designed to be reciprocal in nature with no exchange of payment taking place between the jurisdictions" (p. 95).

The earliest written mutual aid agreement with RFD that was located by this author dates back to September 20, 1950. Six municipal police and fire departments in the area signed the agreement. A later mutual aid agreement dating back to December 31, 1958, added two new fire

departments bringing the total to eight. At this time, DCFD No. 2 was the first fire district on the mutual aid list. Folk (1975) wrote that mutual aid between most of the surrounding departments grew after "the great Roseburg Blast of 1959" (p. 1).

The great Roseburg Blast of 1959 was an ammonium nitrate explosion that occurred at 1:00 a.m. in the city center killing 13 people and injuring 72 others. The explosion leveled several city blocks and was of such magnitude that fire and police departments throughout the state of Oregon responded and provided assistance. To date, RFD is included in a mutual aid list that has grown to over 35 municipal and rural fire districts throughout Douglas County.

The City of Roseburg's motto is *The Timber Capital of the World*. During the timber industry peak years of the 1970's and early 1980's, the City of Roseburg had several lumber mills both within its city limits and near its boundaries. These mills were a source of many fire and medical emergencies. The dryers used to dry the lumber frequently caught fire. The City of Roseburg expanded and mills within its boundaries were being replaced by strip malls. Many of the neighborhoods that were once located on the city limit boundary were annexed and became part of the RFD's responsibility. In 1975 RFD and DCFD No. 2 entered into their first automatic mutual aid agreement for fire protection. The city's growth now placed DCFD No. 2's headquarters fire station within city limits. DCFD No. 2 was a valuable asset to RFD as a close third engine on structure fires. In turn, RFD was a valuable asset to DCFD No. 2 as the closest unit with access to many of the unincorporated pockets that bordered the city limits and the numerous dryer fires at the lumber mills. In 1975, automatic mutual aid, also known as automatic aid, was a new concept for these departments. As defined in the National Fire Protection Association (NFPA) 1710, *Standard for the Organization and Deployment of Fire Suppression, Emergency Medical Operations and Special Operations to the Public by Career Fire Departments, 2001 Edition*, "Automatic aid is the pre-determined response of personnel and

equipment for an alarm to a neighboring jurisdiction. This process is accomplished through simultaneous dispatch, is documented in writing, and included as part of a communication center's dispatch protocols" (NFPA, 2001, p. 4).

Automatic aid now provided both departments reciprocal benefits that also had positive impacts on their Insurance Services Office (ISO) ratings. Although this concept was new and the benefits for the district and city were significant, Battalion Chief Seibold (personal communication, October 17, 2002), stated that, "It was a difficult adjustment for the city fire department personnel. They found themselves frequently being the first engine on scene at buildings they were unfamiliar with".

In July of 1979, DCFD No. 2 moved out of its headquarters station located in the city and relocated east of the city limits, approximately four response minutes outside the city line. DCFD No. 2's fire station relocation resulted in many operational changes for both departments. DCFD No. 2's new station location now required a longer travel distance and greater response time to those areas bordering the city limits. This in turn impacted RFD's automatic aid responses bordering outside the city limits. RFD found themselves consistently on-scene first and for longer periods of time prior to DCFD No. 2's arrival. Another change occurred in the number of RFD's fire engines that responded to structural fires inside the city limits. Prior to DCFD No. 2's relocation, RFD responded two engines, from two stations, on structure fires inside the city limits. DCFD No. 2 assisted in responding the third engine from their city located main station. An effort by RFD to maintain a quick three engine response to structure fires within the city limits caused RFD to respond with all three fire engines from their fire stations. The parity and equality of the agreement suffered as RFD now responded to a greater number of emergencies than DCFD No. 2 (Evanoff, 1979, p. 2).

In September of 1979, the automatic aid agreement between RFD and DCFD No. 2 ended because of political reasons according to then DCFD No. 2 Fire Chief Jim Wilson (Evanoff, 1979, p. 2). Then Roseburg Fire Chief George Thompson said at the time, "automatic aid is no longer in the city's interest, but Roseburg might agree to aid the district if the city were reimbursed. The district's stations are so far out we really can't utilize them anymore"(Evanoff, 1979, p. 2). Chief Wilson countered that the City wanted to annex an unincorporated housing development into the city limits and downgrade the type of protection it was currently providing. The mayor responded,

> The city has no obligation to provide free fire service and the city feels the people in the fire district are entitled to the best fire protection possible. But fire protection there remains the responsibility of the fire district and at this point the district has repeatedly indicated it does not wish to discuss continuing automatic aid with us. It is the city's understanding that they feel the level of fire protection is adequate (Evanoff, 1979, p. 2).

Chief Wilson explained that they did not ask for automatic aid to be discontinued, rather, the city had informally suggested that the fire district contract for aid with the city. The contract would pay Roseburg for service in the fire district's area. An ISO supervisor said that neither city nor district residents would pay higher fire insurance rates because of the aid lapse. According to RFD's figures through August of 1979, the city had responded to 70 district emergencies and the district responded to 42 city emergencies under the automatic aid agreement (Evanoff, 1979, p. 2).

During a Roseburg City Council study session on August 21, 1979, then City Manager George Stubbert explained that the automatic aid agreement was initially entered into to provide the closest fire engine from the nearest fire station to emergency scenes. Then City Mayor Mike Wyatt noted that the statistics for the year and a half prior to DCFD No. 2's station relocation

showed the number of emergency responses between the two departments to have been equal. It soon became evident that when DCFD No. 2 moved out of the city, RFD was providing the closest engine from the closest fire station into numerous DCFD No. 2 areas. More times than not these areas were previously supported first by engines from DCFD No. 2's old headquarters. Then Council Member Bill Nuener summed it up by explaining that he did not feel the Roseburg taxpayers should have to pay for the protection of people living outside of the city. Wes Wilhite, another councilor, suggested the departments work out a contract that included allowing reimbursement for services. The fire chief agreed, stating that this had been a successful arrangement with RFD in the past for another DCFD No. 2 area prior to its annexation into the city (City of Roseburg, 1997, p. 2). No agreement could be reached between the two departments, and differences resulted in the termination of the automatic aid agreement.

In an effort to work together, the district and the city fire departments initiated four consolidation feasibility studies over the years. Firefighter unions of both departments proposed a fifth. The five studies were conducted in 1968, 1976, 1981, 1992 and 1995. Although the two unions voted in favor of a merger in 1995, all studies ended without an agreement between the two departments. A merger between the two departments continues to be discussed and studied in 2003. The poor economy, a dwindling timber industry, a tax disparity (compression), and current budget limitations have both departments giving consolidation serious consideration again.

By 1993, all Douglas County fire departments with the exception of the City of Myrtle Creek were operating through the same central fire dispatch center. Greg Bullock, retired RFD Division Chief from 1975 –2000, author of the 1996 automatic aid *final draft* (Appendix D), and current Division Chief with DCFD No. 2 since 2000 (personal conversation, January 3, 2003), stated that by 1993, the two departments had worked long enough without an automatic aid

agreement. There had been a number of fires bordering the city limits, in DCFD No. 2's area, which RFD could have responded to in less time. Two new fire chiefs, changing attitudes between the departments, a common/central dispatch, and the completion of several city annexations, presented an environment that was conducive to revisit the idea of an automatic aid agreement. A new, broader automatic aid agreement was signed in 1993, between RFD and DCFD No. 2. The new agreement included responses to fire emergencies by a single fire engine and the sharing of specialized equipment and teams from the neighboring department. In addition, RFD agreed to respond to Emergency Medical Service (EMS) calls in a limited number of unincorporated areas bordering Roseburg's city limits because of longer response times for DCFD No. 2. This automatic aid agreement was maintained through February of 1996.

Between 1993 and 1996, many operational changes occurred independently within the two departments. The departments conducted joint EMS drills, participated together in burn-to-learns, and a fifth consolidation feasibility study was in the works. RFD contracted all of its apparatus maintenance to DCFD No. 2 and the two departments shared ownership of a mobile compressed air unit that was being housed at DCFD No. 2's headquarters station. The working relationship between the two departments was positive.

In late 1995, DCFD No. 2 began operating advanced life support (ALS) ambulances out of two of its stations (M. Hansen, Fire Chief DCFD No. 2, personal communication, December 19, 2002). Medical emergencies became 58% of the call volume for RFD (Roseburg Fire, 2003a). Another automatic aid agreement was drafted in 1996 expanding the EMS responses of RFD to accommodate the needs of DCFD No. 2's new ambulance service (Appendix D). The agreement was never finalized. The draft of the agreement was implemented and was to be revisited after its impact on the two departments was determined (G. Bullock, personal communication, January 3, 2003).

In 2001, RFD was given the challenge of finding a new headquarters fire station location to replace a station that was outdated and no longer cost effective to maintain. The three Roseburg fire stations had not changed since their inception, the last one being built in 1968. The critical obstacle to this assignment was that RFD had not been operating under any formal emergency response deployment standard. Components of an emergency response deployment standard are geographic coverage, protection of property value, density of demands for emergency response services, regional response, and resource allocation. Station location decisions could then be easily based on information within a deployment standard.

In reviewing the emergency response deployment standards set by NFPA 1710, the RFD decided it was unworkable but could be used as a basis for developing a community standard. Therefore, Roseburg's deployment standard needed to be developed based on the NFPA 1710 and the specific needs of the community. The process of developing a deployment standard unique to a community's needs became known as the Oregon Deployment Standard Process. Roseburg modeled its standard after that process. Compiling and analyzing the data required more than a year of effort before it was presented to the city council for adoption.

While working through the Oregon Deployment Standard Process it became apparent that RFD and DCFD No. 2 had ignored the significance of maintaining an equitable working automatic aid agreement. The inequity in automatic aid responses was reflected in the attitudes of RFD personnel. Division Chief Jim Lee of the RFD (personal communication, January 2002) concurred with the department's attitude that Roseburg fire was subsidizing DCFD No. 2's ambulance service. The 1996 automatic aid agreement *final draft* (Appendix D), had never been evaluated, altered, or modified to reflect the changes either department had implemented. In addition, RFD was responding to calls in DCFD No. 2's area far more and for far greater lengths of time than DCFD No. 2 was responding in RFD's areas. This trend was confirmed by an

analysis of the emergency incident reports entered into the Oregon All Incident Reporting System (OAIRS). This electronic data reporting software was provided to the Roseburg Fire Department by the Oregon State Fire Marshal (OSFM) in 1997. The data is quantified in table A1 and table A3 in Appendix A between January 1, 1997 and February 28, 2002 (Appendix A). The data showed RFD responding to 73% more automatic aid alarms for a period lasting 84% longer than DCFD No. 2 had responded to calls in the City of Roseburg (City of Roseburg, 2002b).

Present

In addition to the inequality in emergency responses, both departments have experienced many operational changes. Both departments are experiencing an annual increase in call volume for both fire and EMS (City Council, Res. 03, 2002). An increase in call volume, and the associated economic benefits of having an ambulance transport business, directed a greater emphasis on DCFD No. 2 to provide paramedic training and other EMS programs. Subsequently, DCFD No. 2 purchased three ambulances and is currently writing the specifications for a fourth. The number of ambulance responses and associated economics outweighed the need for replacement of an occasionally used 1976 aerial ladder truck. Postponement of replacing the ladder truck in 1996, when it reached its service life limits, forces DCFD No. 2 to rely on RFD for all of its aerial ladder truck needs (Douglas County Dispatch, 2003).

RFD's decision not to run ALS ambulances dramatically reduced the amount of joint EMS training between the two departments. In October 2000, DCFD No. 2 began performing in-house EMS training for all of its personnel and asked to be let out of the joint training with WEST Ambulance Authority and RFD (RFD training records). WEST Ambulance Authority is the major provider of ambulance service in and around Douglas County. WEST Ambulance is a

private business partner in an intergovernmental agreement between RFD and DCFD No.2 called MEDCOM.

No longer did the EMS emergencies for DCFD No. 2 end on scene. DCFD No. 2's out-of-service times increased as a result of transporting patients to the hospital, writing longer medical reports, and the additional time required to bring the ambulance back into service. During these out-of-service times, DCFD No. 2's ambulances are unavailable for other emergency responses to fires or EMS emergencies. For the majority of DCFD No. 2's unavailable times, RFD stands-by for fire and medical emergencies in primarily DCFD No. 2's headquarters station area. Additionally, DCFD No. 2 places their headquarters station out-of-service for training approximately 10 hours per week (Roseburg Fire, 2003b). All of these out-of-service times for DCFD No. 2 increase the likelihood of RFD responding to an emergency inside the district's area. The out-of-service times also lower the response reliability of DCFD No. 2 for RFD emergencies, while the chance of not receiving the closest available fire engine increases for RFD. In an effort by DCFD No. 2 to provide the closest available unit to fire emergencies inside the city limits, RFD was occasionally assisted by firefighters donning turnouts in ambulances.

A change in the NFPA/Occupational Safety and Health Administration (OSHA) regulations (two-in/two-out rule) has affected both departments in requiring additional personnel be on-scene prior to fighting interior structure fires. Originally, DCFD No. 2 provided an engine from a single station to the same city station for all city structure fires. As a result of the new OSHA regulation, DCFD No. 2's fire engine response to a city fire station call for standby was changed to require a direct response at the emergency scene. Without modification to the dispatch run cards, DCFD No. 2 continued to send its same station to all structure fire scenes located anywhere in the city limits. A critical component was overlooked, and RFD did not

receive the closest available unit. However, RFD continued to send its closest available engine to DCFD No. 2 for all emergencies.

In January 2002, RFD approached DCFD No. 2 to review the findings of its new Standards of Coverage for Emergency Responses document and to clarify some of the operational procedures that were outdated or inconsistent with standard procedures. The inequities in the automatic aid agreement draft were discussed and resolved similarly to the 1979 solution. However, rather than eliminate the entire automatic aid agreement, DCFD No. 2 chose to provide RFD with two of their closest available engines, for all city structure fires. In an effort to provide run equality, DCFD No. 2 chose to scale back RFD's responses to only structure fires in their area. The dispatch run cards reflected the new changes, yet the automatic aid draft document was never modified or finalized. The two departments were going down the same path they had traveled 23 years earlier, seeking run-for-run equitability. The 1993 notion of having the public receive the closest available unit was now lost. Since the last modification to the dispatch run cards on March 1, 2002, RFD continues to respond to more alarms in DCFD No. 2's area, and for greater lengths of time as quantified in tables A2 and A4 in appendix A.

Future

This research is relevant to the Executive Planning course presented at the National Fire Academy. The course emphasized that for a plan to be successful, all of the tools of project management should be considered. The automatic aid agreement draft of 1996 lacked the implementation phase (National Fire Academy, 2001, Module 4). Adjustments were made to the agreement in 2002 without an analysis of the current situation, plan, or written modifications. Using the tools of project management taught at the National Fire Academy may prevent another failed attempt for a successful automatic aid agreement. For the two departments to provide the public maximum protection during poor economic times, it will be necessary to analyze its

operations, determine if automatic aid is a viable component, and if it is, develop a plan that is equitable and can be maintained and modified to the changing operational environment.

LITERATURE REVIEW

The purpose of this review is to provide information relative to the research problem of examining and adjusting the current automatic aid agreement between RFD and DCFD No. 2. The review has been divided into four main areas and addresses the issues raised by the research questions and the automatic aid survey. These areas include: benefits of automatic aid, equitable options, planning, and elements of an agreement.

Benefits of automatic aid

Most fire departments do not singularly posses all of the resources necessary to provide equipment, staff and quick response to all emergencies. Coleman (1992) states, "The benefits everyone stands to gain from a cooperative, well-defined and implemented automatic aid program are tremendous" (p. 52). The benefit of instantly increasing a department's staff at a moments notice is of great value to a community.

> Even though equipment and facility costs can be high, labor costs tend to be the single highest cost element of providing fire, EMS and police emergency response services. Consequently, manpower planning is one of the central elements in efficient emergency services provision. (Church, Corrigan, & Sorensen, 2001, p. 219).

Smith (2002) maintains that automatic mutual aid agreements can resolve shortages of personnel until more firefighters can be funded or hired. Smith believes it makes good sense to dispatch the closest available resources to structure fires independent of local boundaries. Although communities may be concerned when their engines respond to calls in neighboring areas, Smith sees it as an affordable insurance policy when faced with personnel shortages.

Cowardin (1993) adds that the use of automatic aid and the incident command system (ICS) are two viable options in saving additional tax dollars while improving responses to incidents. The cost is minimal while offering improved responses to all types of emergencies, no matter the size or location. The authors of the *18th edition of the Fire Protection Handbook* (1997) wrote that, "…several techniques are used by progressive fire officials to…[achieve] adequate response capability and capacity. These include using automatic aid from nearby departments, [and] elaborate mutual aid agreements" (p. 10-31). Thomas (1992) wrote of the fire department's budget problems and their very futures resting on the answer of consolidation as a more permanent and cooperative effort. Thompson (1994) observed that as the fire service faces shrinking resources it would be turning to non-specific joint ventures to answer the public's growing expectations. Furey (1994) suggested that "growth is the major component in the illness in service delivery problems for fire organizations. It may be insidious–sneaking up on you over a number of years, or it may be sudden, seemingly occurring overnight" (p. 30). Listing fire department priorities and hanging a price tag on every item matched with the identification of immediate and ongoing sources of funding and neighboring resources will go a long way toward easing a department's budgetary pains. Furey further recommended automatic aid as a means to reduce overall apparatus needs and the duplication of specialized teams.

On the World Wide Web this author found numerous minutes from city council meetings that documented fire agencies, for the first time, initiating automatic aid agreements with their neighboring fire departments. Each community appeared to have valid concerns and reasons for entering into an agreement. In a communication between the mayor and city council of Fort Worth, Texas, the council recently voted to allow the Fort Worth Fire Department and the City of Denton Fire Department to enter into an automatic mutual aid agreement for incidents requiring fire protection, emergency medical services, hazardous materials mitigation and

technical rescue (City of Forth Worth, 2002). This is an example of the sharing of resources to an extent beyond structure fires and personnel.

Firefighting standards and Insurance Service Organization (ISO) ratings have long driven operational needs in the fire service. Carter and Rausch (1977) wrote, "all aspects of the management of physical resources are influenced by the grading schedule, and many of the grading schedule's emphasis on personnel, equipment, and water supply capability" (p. 268). Using automatic aid as the mechanism to improve ISO ratings and to meet new NFPA standards was found in the meeting minutes of the Mayor and the committee-of-the-whole of the City of East Moline, Illinois. The Moline Fire Department had requested an automatic aid agreement with a neighboring fire department with whom it had shared a mutual aid agreement. The request was to automatically provide additional resources to structure fires from either department. This change would establish points towards an ISO rating and provide Rapid Intervention Team (RIT) personnel to meet OSHA's Respiratory Protection Standard requirements. The budget impact to the city would be increased fuel cost for an additional 50-70 incidents per year and possible increased exposure to injuries or damaged equipment (City of East Moline, 2002).

As documented in the Pebble Beach Community Service District Board of Director's (PBCSD) meeting minutes, the PBCSD Fire Department and City of Monterey, California Fire Department entered into an automatic mutual aid agreement that would include wildland and structure fire responses between the two departments. After twenty years of sharing a common boundary the two departments finally entered into an equitable automatic aid agreement. It was anticipated that the number of emergency responses would be equal, and the costs to PBCSD be negligible (Pebble Beach Community Service District, 2002).

Fire chiefs often find themselves in a predicament when their jurisdictional boundaries protrude through other jurisdictions or it is not feasible to build stations in remote areas. In many instances other agencies are quicker to respond to those problems than one's own. Such was the problem found in the Committee of the Whole meeting minutes for the City of Twinsburg, Ohio. It was reported that an automatic aid agreement entered into with the City of Solon in 1999 had been very successful. Solon's medical units were arriving into the northern section of Twinsburg quicker than Twinsburg's own fire department. By the request of the Twinsburg fire chief, the City of Reminderville –another neighbor to the north of Twinsburg– was considering entering into an automatic aid agreement with Twinsburg. Reminderville would also have units closer to Twinsburg residents than Twinsburg's own units. There was concern from a citizen of Reminderville that the fire department could be caught serving another community when it needed its own resources within its own boundaries. Another citizen recommended one central fire station representing all three departments on the north boundary of Twinsburg be established (City of Twinsburg, 2001).

Granito (1993) addressed a question presented to him from a Pennsylvania fire chief who questioned, "Is it fair to our taxpayers…to provide this service to another community that was unwilling or unable to provide for its own protection" (p.30)? Granito's answer offered no one single solution. He expressed a need for the community to expand its financial base by increasing the protection area and refiguring the distribution of suppression resources. He further recommended that attention should be placed on comprehensive prevention, public education, and fire protection engineering to produce a more balanced safety system. "Simply combining several weak fire departments without improving the mix is not going to result in improving fire protection" (p. 30). Formalized mutual and automatic aid agreements are viable answers yet, "In more cases than we realize, regionalization, consolidation, or merging may be

the best long term answers to providing affordable community fire protection" (pp. 30, 100). Johnson and Snook (1997) concurred:

> Although mutual aid agreements can be broad-based and cover 20 to 30 departments, and where automatic aid arrangements tend to be more specialized and designed specifically for two or three individual departments, both forms of aid are the first steps toward a more permanent cooperative effort through consolidations, mergers or contracts (p. 17).

The authors of *The Fire Protection Handbook* documented use of automatic aid on initial responses by fire departments is helpful in getting first-arriving pieces of apparatus to emergency scenes within five minutes of the sounding of the alarm (Fire Protection Handbook, 1997, p. 10-35). Jenaway (1993) stressed the need to have the closest available units respond to fire emergencies when using automatic aid. His logic rested in the fact that fires became larger the longer they burned. The theory became an easy guide for problem solvers at fire departments considering the challenge of arriving at a scene 20 or 30 minutes into a blaze. Carter (2000) stated that fire does not wait for help from mutual aid to arrive, and when it does it usually arrives too late to be of any real assistance. For this reason, he is a firm believer in automatic aid and regional dispatching. NFPA (2001) relies heavily on the time-temperature curve for fire departments to meet all initial alarm assignments necessary to ensure sufficient personnel, equipment and resources for fire suppression services. It permits the use of established automatic mutual aid or mutual aid agreements to comply with these initial alarm requirements (p. 7).

A board of directors action summary for the Sacramento Metropolitan Fire Department (SMFD) revealed the consideration of an automatic aid agreement between SMFD and Placer County, California Fire Department. SMFD Fire Chief Rick Martinez, was not in favor of the agreement, as it did not provide any reciprocal action or service to his district. An earlier

proposal for reorganization would have provided an immediate increase in the level of service to the Dry Creek area of Placer County fire protection without an increase in their tax base. However, Placer County elected to be responsible for its own fire protection and contracted for service with the California Department of Forestry. The SMFD recommended that the residents in Dry Creek tell their elected officials to subsidize a higher level of service (Sacramento Metropolitan, 2001).

Automatic aid may not be for everyone. Carter (2000) said fire chiefs who want automatic aid to run into their town every time they call, but who refuse to send out equipment to standby in another community, are being selfish and 'one way' (p. 1). Carter believed that the parties to a mutual aid agreement have to operate according to a *share and share alike* operational approach. The agreement must be reduced to a written form, implemented and monitored on a continuing basis. "There should be provisions for regular meetings of all signatories to the agreement. And drilling among the participants should occur on a periodic basis" (p. 2). The agreement has to be an evolutionary process to be effective. "Any group formed on the unequal footing of active versus moochy [*sic*] participant will collapse under the weight of the strain caused by the *Mutual Aid Mooch***"** (p. 3).

Equitable options

Lavote (1996) noted that, "Mutual aid agreements are usually designed to be reciprocal in nature with no exchange of payment taking place between the jurisdictions" (p. 95). However, when automatic aid is not reciprocal many decision-makers will not consider having their taxpayers absorb the cost of services for another jurisdiction. Lavote offered a solution of "functional consolidation" that could provide for an exchange of resources between jurisdictions that need not be reciprocal in nature. In-kind service agreements or contracts between jurisdictions to provide specific functions can be developed. These often eliminate a duplication

of efforts, or resources, by providing the taxpayers of both jurisdictions greater cost efficiency given the limited available resources. The authors of *The Fire Protection Handbook* (1997) suggested that areas deficient in firefighting resources should contract in advance with another jurisdiction for certain firefighting assistance as outside aid programs. These contracts include basic first-alarm responses, and in other cases additional assistance for fighting major fires. Another recommendation to achieve true reciprocity is offered by Coleman and Granito (1988) in exchanging one type of aid for another. "For example, one department provides training resources in exchange for response coverage" (p. 344).

In Texas, the City of Austin's Fire Department met the challenge of providing a constant level of fire and EMS protection in its growing community by contracting with volunteer departments (Sybesma, 1991). The city was experiencing rapid growth and annexing new areas faster than new fire stations could be constructed. Three-year contracts were written between neighboring volunteer departments with response times that were faster than the city stations. Three-year contracts provided Austin additional time to construct new stations and purchase new equipment. This program was considered a success by meeting a few basic contracting requirements that included mutual trust, respect, shared goals and agreed-upon expectations. Not all of the contracts were extended. After an evaluation of response times, it was learned that in some areas the Austin Fire Department's response times were equal to or better than those of the volunteer departments.

Specialized equipment and functional consolidation is a part of many automatic aid agreements. Carter (2000) illustrated the need of taking the New Jersey Fire Department to task for its continual need of help from a mutual aid aerial ladder company. Carter explained, "Theirs broke down, and they claimed that they did not have enough money to buy a new one" (p. 1). Believing in the *share and share alike* approach to mutual aid, Carter stated that if his

department was going to send a fully staffed pumper when one is needed then the other department should be prepared to send an aerial ladder his way when he needed it. Back in 1995, Carter (1995) boldly stated:

> It does not mean that you are too cheap to buy that aerial ladder or that pumper which you really need and you intend to continually mooch off of your neighbors. You must bring as much to the dinner table as you intend to ask for (p. 31).

Lavote (1996) provided a similar example of aerial ladder truck strife, but offered a solution. The City of Covina, California did not operate a front-line truck company because it lacked the financial resources to place a fully staffed unit in service. Neighboring West Covina prepared a cost analysis of the truck for the total operational costs in both jurisdictions. It found the City of Covina had increased the activity of the truck's use by 33 %. It was determined that a *joint use* or *functional consolidation* agreement between the two jurisdictions would fit both cities limited finances. The City of Covina agreed to pay one-third of the total cost associated with the truck company operation. Part of the payment would be through additional *in-kind* services and operational support to West Covina, such as fire and arson investigation, instructor/training support and computer technology. Lavote advised, "Progressive fire service leaders should take the blinders off and look at possible functional consolidation. It's a way to be proactive. Do it before you're told to" (p. 96).

Planning

Abraham Lincoln said, "If we know where we are and something about how we got there, we might see where we are trending – and if the outcomes which lie naturally in our course are unacceptable, to make timely change" (as cited in David, 1987, p. 2). Harper (2001) also demonstrated the need to be flexible when following a plan by stating:

> Some leaders stick with a plan even when the conditions for success change. Continuing to operate along a path that no longer applies is fuel for fire. When implementing change, set checkpoints or milestones to evaluate your efforts. At those times, scrutinize the results to date along with the current circumstances. Stay focused on the big picture, but be prepared to adjust the plan if necessary (p.15).

Granito (1991) touted that the key to a successful automatic aid agreement was through careful planning. That planning depended upon a high degree of cooperation and the good will of other people and their organization being firmly in agreement about their responsibilities. Granito wrote, "the best designed plans can fail when the people who promised to participate cannot or do not live up to their agreement. …most written plans are merely promises made by people to do specified things in specific ways when certain things occur" (p. 49). Establishing mutually satisfactory standard operating procedures for each item in the hazard analysis prevents outside agencies from operating unsafely in one's own jurisdiction. Just because joint planning has occurred does not mean that both organizations buy into a plan and that full cooperation will be obtained. It is necessary to give each organization a say in the plan's formulation to receive satisfactory results. "The degree and quality of local plan processing corresponds directly to the degree of cooperation and the quality of decision making during a crisis" (p. 52).

Lavote (1996) formed an organizational checklist to determine if functional consolidation would work prior to the planning phase. It included (a) an evaluation of the strengths and weaknesses of your organization's protection systems, (b) determination of a neighboring jurisdiction's resources that may address your organization's weaknesses, (c) your organization's strengths that could address weaknesses in the neighboring jurisdiction, and (d) determining all duplications of effort or resources between multiple jurisdictions that could be identified and addressed by functional consolidation.

Elements of an agreement

Addressing specific elements within an automatic aid agreement prior to its implementation will prevent many questions and or problems. Francis (1997) wrote of the need for jurisdictions to define the capabilities and expectations of engine companies, special response units, and medical units when planning automatic aid agreements. Differences in a jurisdiction's staffing and equipment expectations must be ironed out in the planning phase rather than during response operations. A clear understanding of a jurisdiction's responsibilities and coordination requirements within the Incident Command System during an emergency are critical elements of automatic aid. The fiscal element of the agreement requires defining who is responsible for expenses, losses, billing and payment for equipment and personnel. Francis concluded,

> Once the agreement has been clearly written, thoroughly reviewed, and approved, all personnel with action assignments in the agreement should participate in a documented orientation session. Such training will help to ensure that all personnel understand their individual authority and responsibilities under the agreement (p. 33).

The authors of NFPA (2001) summed up the elements of a mutual aid, automatic aid and fire protection agreement as:

> Mutual aid, automatic aid and fire protection agreements shall be in writing and shall address such issues as liability for injuries and deaths, disability retirements, cost of service, authorization to respond, staffing, and equipment, including the resources to be made available and the designation of the Incident Commander (p. 7).

James Campbell performed a national survey in 1992 that resulted in a return of 707 responses from 35 % career, 34% combination and 41% volunteer departments out of 2,030 mailed surveys. The data revealed that 87% of the responding fire departments had a formal mutual aid agreement, 60% of the responding fire departments had an automatic aid agreement and 82% of

the responding fire departments had areas in their region that could receive service from another jurisdiction by providing the closest available resource. "This startling statistic supports the hypothesis that efficient service is jeopardized by the lack of cooperation within the fire service" (Campbell, 1992, p. 44). It appeared from the data that smaller departments, with smaller budgets, were very likely to have regionalized services, whereas departments protecting larger urban areas had little contact with their neighbors. The recommendation from the survey was those departments servicing populations with fewer than 250,000 should be utilizing automatic aid agreements because the citizens were most likely not receiving the closest available help. Many writers also suggested automatic aid or regional consolidations as the most obvious methods of maintaining or improving services in the face of continued fiscal pressures.

Literature Review Summary

The literature review provided key insights into the many economic advantages automatic aid agreements provide the fire service. The examples included: meeting additional staffing requirements at structure fires, improved ISO ratings (resulting in lower insurance premiums for the public served), meeting special team needs (RIT), and the sharing of apparatus and equipment.

A preliminary review of several author's solutions to meeting fire service standards by increased staffing and quick response to fire scenes were mirrored by fire chiefs' efforts throughout the country to provide and receive automatic aid. Further, review of fire service journals reveal a consistent concern of fire officials that automatic aid be fair, equitable, and benefit to all who participate. Furthermore, the fire journals provided many options in maintaining automatic aid equitability through contracting, functional consolidation and in-kind service agreements. Although the fire journals touted the benefits of automatic aid as an

insurance policy, citizens and chiefs alike shared their trepidations of being caught outside their cities while assisting an adjoining fire district.

The fire service literature stressed the importance of proper planning with joint cooperation that includes good will; clear expectations, understandings, and responsibilities. Several authors (Carter, 2000; Lavote, 1996; Francis, 1997), including those of *NFPA 1710*, examined the elements needed to produce a successful automatic aid agreement.

These works summarized in the literature review affected the research project in various ways. First, the identification of the benefits automatic aid offered fire departments highlighted the need to examine those benefits found in RFD and DCFD No. 2's automatic aid agreement. Secondly, the scarcity of equitable options introduced illustrated the need to examine the automatic aid practices of other fire departments.

PROCEDURES

This research project employed historical and descriptive research methodology organized according to the *American Psychological Association* Guidelines (American Psychological Association, 1994) in order to (a) show the development of automatic aid and how that development has impacted RFD and DCFD No. 2's current status and possible future actions, (b) examine economic incentives, operational changes, and fire service standards, (c) assess the benefits and viability of automatic aid, (d) examine the elements of, and the planning for, successful automatic aid, and (e) examine the automatic aid practices of other fire departments within the State of Oregon.

The procedures used to complete this research included: a literature review, examination of Roseburg city records, a survey of RFD's response data (City of Roseburg, 2002b),

communications with several retired and active chief officer from RFD and DCFD No. 2, and a survey of the automatic aid practices of other fire departments within the State of Oregon.

Literature Review

The research analysis was initiated at the National Fire Academy's Learning Resource Center (LRC) during August 2002. A search on the subject of mutual and automatic aid was undertaken. Additional trade journals and books were located at Umpqua Community College's library in Roseburg, Oregon between September and October 2002. Past articles from the local newspaper provided historical information regarding RFD and DCFD No. 2. The research in December 2002 was focused on current information available on the World Wide Web. The search targeted fire department automatic aid, mergers and consolidation of services throughout the country. City council and fire board meeting minutes located on the Web offered current fire department documentation of automatic aid discussions, requests and adopted agreements.

Review of City of Roseburg records and OAIRS data

A review of City of Roseburg records was conducted between October and November 2002. The records targeted by this review include past automatic and mutual aid agreements between RFD and other fire jurisdictions (Appendix D). Past minutes of special meetings between RFD and DCFD No. 2 regarding automatic aid were reviewed for historical significance and operational procedures. In addition, several past consolidation/merger feasibility studies between RFD and DCFD No. 2 were examined.

The raw response data collected from OAIRS and Roseburg's Standard of Coverage for Emergency Responses were entered into several tables for further analysis.

Oral communications and statewide survey

On October 17, 2002 a discussion concerning the history, department's attitudes, and practices of the RFD was conducted with retired Fire Chief Leroy Seibold, who worked for the organization from 1955 through 1984. A follow-up discussion on similar topics was held on January 3, 2003, with Division Chief Greg Bullock, who worked for RFD from 1975 through 2000. In 1996 he authored the automatic aid *final draft* between RFD and DCFD No. 2. He is currently working as a division chief with DCFD No.2. Historical comments were made in a shift meeting by retired RFD Fire Chief (1990-2001) Ford Swauger and corroborated by Division Chief Bullock and RFD Division Chief Lee. Historical clarifications were made by active DCFD No. 2 Fire Chief Mike Hansen and active RFD Division Chief Jim Lee.

A survey was conducted to collect information about, and perceptions of automatic aid agreements from fire departments throughout the State of Oregon (Appendix B). The survey will be used to assess opinions and assist in the determination of automatic aid viability and equitable options. A pilot survey was given to one division chief, one lieutenant and one firefighter. All were requested to review the survey for mistakes and clarity. These three individuals found the survey to be a clear and understandable instrument.

The survey was e-mailed to 22 fire department chiefs from a list of addresses maintained by the Oregon Fire Chief's Association. The departments were selected based on a cross section of career and combination departments with municipalities and fire districts serving both large and small jurisdictions. The surveys were sent out mid-November. Eight e-mail addresses were incorrect. The correct addresses were found and the survey resent. Of the 22 surveys distributed, 19 fire departments responded by fax, e-mail or domestic mail over the course of the following month. The eighty-six percent response rate was attributed to the speed and ease of the short answer form of the survey and because fire chiefs frequently perform comparative

analysis of the practices of other Oregon fire departments in forming policies and assessing programs.

The survey contained a total of 10 questions, nine of which required a “yes” or “no” response. One question required several “yes” or “no” responses, and the last question required a fill-in response. Survey responses were organized and listed in a table (Appendix C). Qualitative responses were summarized and included in the results section of this report.

Assumptions

Three assumptions were made when performing the research for this project. First, it was assumed that all authors referenced performed objective and unbiased research. Second, it was assumed that the information obtained from City of Roseburg records and OAIRS data were accurate. Third, it was assumed that survey respondents answered all questions fairly and objectively.

Limitations

It was discovered that although mutual and automatic aid agreements are popular and rather broad topics, reciprocal agreements based on anything other than response data were very rare.

Another limitation was that relatively few books make reference to the subject. As the subject of mutual aid has been around for several years, much of what has been written is not recent. The books were good for historical data, however, much of the innovative changes occurring in automatic aid agreements is happening at this moment and is very specific to the jurisdictions they represent. This was apparent in the shortage of EMS information, relative to the increased emphasis and call volume in EMS. Although the literature just touched on it, the number of Oregon fire departments surveyed using EMS in their automatic aid agreements was 83% (Appendix C).

The electronic reference formats recommended by the *American Psychological Association* (APA), (http://www.apa.org/journals/webref.html) requires only the Website address be cited in the text when the entire Website is being referenced. Therefore, the specific documents referenced were the entire site. The additional information provided by this author in the reference list, although not required by the APA, allows the reader to find the Websites. Additional information is needed to access specific documents, but the intent is to help interested readers gain access to the information.

Definition of terms:

This list of terms and abbreviations is to help the readers better understand the terminology used in this document.

ALS: Advanced Life Support.

APA: American Psychological Association is a style manual used by writers.

Automatic aid: "Automatic aid is the pre-determined response of personnel and equipment for an alarm to a neighboring jurisdiction. This process is accomplished through simultaneous dispatch, is documented in writing, and included as part of a communication center's dispatch protocols" (NFPA, 2001, p. 4).

BLS: Basic Life Support.

EMS: Emergency Medical System.

Functional consolidation: A sharing of resources between two or more jurisdictions. A few examples are a common dispatch center, aerial ladder truck, apparatus maintenance and joint training.

ICS: Incident Command System. A system by which facilities, equipment, personnel, procedures, and communications are organized to operate within a common organizational structure designed to aid in the management of resources at emergency incidents.

ISO: Insurance Services Office collects information on a community's public fire protection and analyzes the data. It then assigns a Public Protection Classification from one to 10.

LRC: National Emergency Training Center's *L*earning *R*esource *C*enter which is located on the grounds of the National Fire Academy.

Mutual aid: "An agreement entered into by jurisdictions to provide for services, resources and facilities when local resources prove to be inadequate to cope with a given situation"(Lavote, 1996, p. 95).

Mutual aid mooch: A term coined by author Harry Carter for fire departments that do not share their resources.

NFPA: National Fire Protection Association, a nonprofit membership association that produces the National Fire Codes, fire service standards and fire and life safety educational materials/programs.

OAIRS: Oregon All Incident Reporting System is an electronic data reporting system developed in 1996 by the Oregon State Fire Marshal's office. Used by the Roseburg Fire Department since 1997.

Oregon's Fire Service Deployment Standard: A model fire service deployment standard designed to meet the unique characteristics of a community's needs, based on NFPA Standard 1710.

OSHA: Occupational Safety and Health Administration. A U.S. federal agency that develops and enforces standards and regulations for safety in the workplace.

RIT: Rapid Intervention Team- At least two personnel who assist in rescuing personnel trapped in a structure fire, meeting the OSHA two in/two out firefighting standard.

Standards of Coverage for Emergency Responses: Written procedures that determine the distribution and concentration of the fixed and mobile resources of a fire and EMS organization.

Two in/Two out rule: An OSHA respiratory protection standard requiring a minimum of two personnel be outside a structure fire and ready to rescue firefighters that may become trapped inside.

WWW: World Wide Web

RESULTS

Automatic aid survey results:

The automatic aid survey was conducted to determine the extent of, and bases for automatic aid, the types of functional consolidation, perceptions of equitability and the means by which equitability could be accomplished (Appendix B). The results are quantified in table C1 in Appendix C. The survey instrument is also used to assess the viability of automatic aid (Appendix C). Question one asked, "Do you currently have a mutual aid agreement with another department, or departments?" One hundred percent (19 of 19) indicated that their department had a mutual aid agreement.

Question two asked, "Do you currently have an automatic mutual aid agreement with another department, or departments?" Ninety-Five percent (18 of 19) indicated that they did have an automatic aid agreement with another fire department, while 5% (1 of 19) indicated that it did not.

Question three contained four questions having to do with the components each automatic aid agreement contained. The first question asked, "Does your automatic mutual aid agreement include fire emergencies?" One hundred percent (18 of 18) having automatic aid

included fire emergencies. The second question asked, “Does your automatic mutual aid agreement include special equipment?” Seventy-two percent (13 of 18) having automatic aid included special equipment, while 28% (5 of 18) indicated they did not. The third question asked, “Does your automatic mutual aid agreement include specialized teams?” Sixty-one percent (11 of 18) indicated they did include specialized teams, while 39% (7 of 18) indicated they did not. The forth question asked, “Does your automatic mutual aid agreement include EMS emergencies?” Eighty-three percent (15 of 18) indicated they did include EMS emergencies, while 17% (3 of 18) indicated they did not.

Question four asked, “Do you feel that your automatic mutual aid agreement is equitable?” Seventy-eight percent (14 of 18) indicated that they felt their automatic mutual aid agreement was equitable, while 17% (3 of 17) indicated they did not feel that it was. Five percent (1 of 18) did not respond.

Question five asked, “Is your automatic mutual aid agreement equitably based on the type and volume of responses?” Forty-four percent (8 of 18) indicated that their automatic aid agreements were based on type and volume of responses, while 56% (10 of 18) indicated that they were not.

Question six asked, “Is your automatic mutual aid agreement equitable because of other mutual agreements?” Twenty-two percent (4 of 18) indicated that their automatic aid agreements were based on other mutual agreements, while 67% (12 of 18) were not. Eleven percent (2 of 18) indicated that they were unsure.

Question seven asked, “Do you regularly update your automatic mutual aid agreement?” Seventy-two percent (13 of 18) indicated that their department regularly updated their automatic mutual aid agreements, while 28% (5 of 18) indicated that they did not.

Question eight asked, “Is your automatic mutual aid agreement a primary consideration for your ISO rating?” Twenty-two percent (4 of 18) indicated that the ISO rating was a primary consideration, while 67% (12 of 18) did not.

Question nine asked, “Is your automatic mutual aid agreement a primary consideration for closest available unit?” Eighty-three percent (15 of 18) indicated that a closest available unit was a primary consideration, while 17% (3 of 18) indicated that it was not.

Question 10 asked, “If you use other agreements to maintain equitability what are they? Please list.” Seventeen percent (3 of 18) indicated that they used other agreements to maintain equitability. The three departments that used other agreements answered as follows: Department number one used training, department number two used an intergovernmental agreement by sharing a fire station, and department number three used training, maintenance, station coverage and purchasing partnerships to maintain equitability within their automatic aid agreements. Eighty-three percent (15 of 18) indicated that they did not use other agreements to maintain equitability.

Research questions

1. What changes have occurred within both organizations and how have they impacted the automatic aid agreement?

The automatic aid agreement RFD and DCFD No. 2 are operating under must be clarified. The 1993 agreement is the official document both jurisdictions found on file. However, a 1996 automatic aid agreement, called *final draft*, found with Division Chief Bullock’s signature, appears to be the agreement used between the two organizations through February of 2002 (Appendix D). This information was confirmed by corresponding emergency run cards maintained by Douglas County Dispatch (Douglas County Dispatch, 2003).

The 1996 automatic aid agreement, *final draft*, differed from the 1993 agreement in two areas. It first expanded RFD's emergency medical responses into several of DCFD No. 2's bordering neighborhoods. Secondly, it placed RFD in a "next available" or "stand-by" position for any type of emergency for all of DCFD No. 2's response areas (Appendix D). These two changes to the agreement became significant in light of the growing number of EMS emergencies within Roseburg.

The Internet search and literature review documented the benefits of the closest available units responding to EMS and fire emergencies, whereas, fire emergencies were found to be the primary use of automatic aid. Only a few examples in the most current Internet search revealed automatic aid being used for medical emergencies. The most current literature reviewed was between 5 and 10 years old. During the same 10-year period, the Roseburg Fire Department responded to over twice as many EMS calls. In 1992, RFD had responded to 1091 EMS emergencies. Ten years latter in 2002, responded to 2331 EMS calls (Roseburg, 2003a). The survey results revealed 83% of the departments had EMS emergencies as part of their automatic aid agreement. A survey shortcoming was that it never defined the extent of the EMS services being provided.

The 1996, automatic aid *final draft* agreement provided a means for areas to be covered by the closest available unit. The impact of this change, as conveyed by the Roseburg fire chief to the RFD, was an anticipated increase of eight to nine calls per year (F. Swauger, retired RFD Fire Chief, 1990-2001, personal communication, December, 1995). The failure to re-evaluate and modify the automatic aid agreement in response to the changing environment created a change in the working relationships between the two departments.

Corresponding with a poor economy and a static number of personnel, the two departments were forced to analyze their operations. DCFD No. 2 opted to enter into the ALS

ambulance transport business which required RFD to respond into several DCFD No. 2 areas with basic life support (BLS) fire engines. The response data reflected a growing inequity in automatic aid responses between the two departments. The regular joint EMS training was reduced to an occasional case review by a shared physician advisor. Separate training required additional standby time by RFD while DCFD No. 2 consolidated station coverage for their independent training.

The decision by DCFD No. 2 to purchase ambulances instead of replacing its aerial ladder truck put a greater dependence on RFD to provide that service. An unquantifiable change was also found in the attitudes of RFD's personnel. The feeling of being in an automatic aid agreement that was not reciprocal was magnified by the data gathered in the deployment plan study. The impact of the operational changes made by DCFD No. 2 on RFD was seldom discussed prior to its implementation (G. Bullock, personal communication, January 21, 2003). These changes compounded the feelings of inequity and distrust felt by RFD personnel.

The literature stressed the importance of automatic aid agreements being mutually reciprocal and based on trust and cooperation. Although it was found that automatic aid was a solution to staffing and resource deficiencies, especially during poor economic times, equity was a primary concern. "Any group formed on the unequal footing of active versus moochy [*sic*] participant will collapse under the weight of the strain caused by the *Mutual Aid Mooch***"** (Carter, 2000, p. 3).

The fact that both departments were changing, and the automatic aid agreement was never evaluated or modified, stressed the limits of the agreement's original intent.

2. Does an automatic aid agreement continue to be a viable option for the two departments?

The literature was very consistent and compelling in showing the benefits of automatic aid. The literature and Internet review provided examples of several departments similar to RFD experienced the same challenges that faced RFD and DCFD No. 2. The viability of maintaining an automatic aid agreement can be answered best by reviewing the advantages an agreement has to offer and, its application to the unique characteristics of RFD and DCFD No.2.

The economy of Roseburg is primarily timber based. It currently faces hard times. The literature demonstrated that automatic aid could provide the means for fire departments to operate more efficiently and effectively by sharing personnel and equipment without significantly impacting an operating budget. The literature also showed that an increase in personnel at emergencies provided an increased level of safety and a means to meet NFPA firefighting standards. The literature revealed automatic aid as a resource available to save fire departments the expense of duplicating resources. This was seen in the sharing of equipment, special teams and apparatus. As a result, this provided opportunities for improving a fire department's ISO ratings, as was observed in the example provided by Covina and West Covina in the sharing of an aerial ladder truck.

NFPA 1710 offered automatic aid as the solution for fire departments to provide the closest available resources for a timely response. The two advantages given for sending the closest available units were found in the time-temperature curve for fighting smaller fires and increased medical viability of patients at medical emergencies. DCFD No. 2 has many areas bordering the city limits where RFD could provide the closest available aid.

The survey showed automatic aid was being used by all but one fire department. The department choosing not to participate in automatic aid is the largest department in the state of Oregon. Because of the department's size, it has greater depth than other, smaller organizations. This mirrored information found in the literature (Campbell, 1992) that demonstrated a trend

among smaller departments, with smaller budgets, having a greater likelihood of regionalized services than larger urban areas. Roseburg is a small department with 32 personnel. It commits its entire resources of on-duty staffing and equipment when fighting a structure fire. DCFD No. 2 staffs two more stations than RFD yet covers 75 additional square miles. DCFD No. 2's response times are generally longer, increasing the chances that fires will be larger once they arrive.

The survey revealed that 83% of the fire departments considered having the closest available unit on scene as the primary consideration for entering into an agreement. Although ISO ratings were not the major consideration for an automatic aid agreement, accounting for only 22%, it was found to be one of many significant factors (Appendix C). This coincides with RFD and DCFD No. 2's relationship. The first alarm response of RFD's ladder truck into DCFD No. 2's areas, and a greater number of engines responding to fire emergencies on the first alarm assignment, are both favorable for ISO rating calculations. The benefits of quicker responses by RFD into bordering DCFD No. 2 areas for EMS and fire emergencies increases a patient's chances for survival and reduces property destruction caused by fire.

Of the fire departments surveyed in Oregon, 100% revealed that those participating in automatic aid included fire emergencies. The literature and Internet review results produced many examples of automatic aid agreements being used by fire departments for predominately fire emergencies. It was discovered that this arrangement was easy to manage and maintain equitability (PBCSD, 2002). The survey showed that as the automatic aid agreements expanded into areas outside of fire emergencies, the number of departments utilizing additional options decreased. This was demonstrated in the findings with 83% of the departments utilizing automatic aid for EMS emergencies, 72% for special equipment, and 61% for specialized teams (Appendix A). It appears that the viability of an automatic aid agreement existing in the

departments surveyed was an absolute. The degree of cooperation and utilization of the many options available were determined by the unique needs of each community and fire department. The same could hold true for RFD and DCFD No. 2.

3. What options are available in making an automatic aid agreement both reciprocal and equitable?

The literature emphasized the need for departments to maintain equitable and reciprocal automatic aid agreements. It was found that the majority of departments maintained equitability with uncomplicated automatic aid agreements used primarily for fire emergencies. The run volume and on-scene times were the means in which equitability was maintained. In the event run volumes and on-scene times were not equitable, other means were offered.

The survey revealed that 17% of the fire departments did not feel their automatic aid agreements were equitable. However, all of these departments regularly updated their agreements. Comments found attached to the survey revealed the inequity was generally overlooked because the response was small and the call volume low. In the case of the RFD and DCFD No. 2's automatic aid agreement, the call volume was high and no review, evaluation or maintenance was performed on the success or failure of the agreement (Appendix A). This set the stage for inequity that colored the attitudes of those working within RFD. It wasn't until the response data was analyzed that the reality of this inequity became clear.

Lavote (1996) wrote of the pitfalls departments face when taxpayers don't want to pay for services from another jurisdiction. Yet, *The Fire Protection Handbook* (NFPA, 1997) offered the alternative of contracting out (paying) for firefighting resources from another jurisdiction. The rapid growth in Austin, Texas required the Austin Fire Department to contract services with a neighboring volunteer department until the city could budget, equip, staff and build their own fire stations (Sybesma, 1991).

Carter (2000) and Lavote (1996) wrote about the use of functional consolidation as a means to share an aerial ladder truck. The solution to achieve equitability found by West Covina's Fire Department was to analyze the total costs to operate the aerial ladder truck and require the City of Covina to pay for its percentage of use. Furey (1994) recommended hanging a price tag on every item or resource requirement. Following this line of reasoning, the City of Covina made payment through in-kind services and operation support to West Covina rather than spending tax dollars. Examples used were fire and arson investigation, instructor/training support and computer technology.

The results found in the Oregon fire department survey were confusing in the area of equitability and require additional follow-up questions. Although 44% based equitability on type and volume of responses, an additional 17% used other agreements. This left a gap of 39% of the departments not accounting for their means of maintaining equitability. The literature suggested that on-scene time could be a means of equitability, special teams for special equipment (equitable trading of resources), or the overall value of automatic aid was in itself all the equitability required. The 17% of fire departments that used other agreements to maintain equitability used training, an intergovernmental agreement to share a fire station, maintenance, station coverage and purchasing partnerships (Appendix C).

It was demonstrated that if there was a high degree of cooperation and good will a successful automatic aid agreement could be reached (Granito, 1991). Coleman and Granito (1998) stressed the need for fire officials to work with other agencies towards solutions to resource and personnel requirements. It was found that there were many solutions from trading, sharing and contracting out used to find equitability in an automatic aid agreement. Although contracting out is a difficult option to stomach for some taxpayers and fire officials, it does provide overall savings for fire departments.

DISCUSSION

Relationship between the study results and findings of others

Reviewing the Roseburg City records revealed various practices of both RFD and DCFD No. 2 that are incongruent to the recommendations of others in the survey and literature review. These practices include (a) evaluation of the beneficial components of automatic aid to determine its viability, (b) considerations of alternative solutions to equitability, and (c) evaluation and maintenance of the automatic aid agreement.

The history of RFD and DCFD No. 2 dates back to the 1950's and to the very origins of the district. The two organizations have shared a close partnership since that time. In 1975, 1993, and expanding in 1996, the two departments initiated equitable automatic aid agreements. Operational changes in both organizations resulted in a complete termination of the agreement in 1979, and severe modifications to the agreement in 2002. Although the literature revealed many positive benefits of maintaining the automatic aid agreement, RFD and DCFD No. 2 found themselves discarding most in an effort to maintain equitability.

The benefits of instantly increasing staff levels without the financial impact on fire jurisdictions were outlined by various authors (Coleman,1992; Church, Corrigan, & Sorenen, 2001; Jenaway, 1993; Smith, 2002; Cowardin, 1993, Carter, 2000; NFPA, 1997; and NFPA 2001). The Internet review provided examples of numerous city council and board meeting discussions reviewing and implementing these same benefits. Since 1993, RFD and DCFD No. 2 have utilized their automatic aid agreement consistently for fire emergencies in an effort to instantly increase staffing and resources. The survey results were consistent with 95% of the departments using automatic aid for fire emergencies. The survey also revealed an increase in the number of departments using automatic aid agreements for EMS emergencies at 83%. RFD and DCFD No. 2 have both experienced a consistent increase in call volume with a

disproportionate increase in EMS emergencies. So much so, that DCFD No. 2 began an ALS ambulance transport service with RFD covering additional unincorporated DCFD No. 2 areas as part of their automatic aid agreement. A six year period passed prior to evaluating response data or revisiting the automatic aid agreement. The attitudes of the RFD reflected the reality of five years of computerized data which revealed a 3.7 times difference in the number of responses between the two agencies. The RFD had responded to 881 calls to 236 DCFD No. 2 calls. It also illuminated the fact that RFD had spent 447 hours assisting DCFD No. 2, and in return received 70 hours. The reaction to this information by DCFD No. 2 was to eliminate EMS from the automatic aid agreement. This change by DCFD No. 2 was made in an effort to bring equity back into the agreement. This action however, mirrored the events 23 years prior.

In 1975 Roseburg City Manager George Stubbert recognized the importance of having the closest available engine respond to an emergency. But, as soon as operational changes between the departments were made in 1979, the solution was to eliminate the agreement all together and end all of the associated benefits. Then city council member Wes Wilhite and fire chief Thompson suggested DCFD No. 2 contract out services to maintain the same level of aid and preserve the automatic aid agreement. This was found to be a political solution as mentioned by DCFD No. 2 Fire Chief Wilson and in similar instances by authors Lavote (1996) and Furey (1994). Eighteen years later, the authors of *The Fire Protection Handbook* and the NFPA standards acknowledged the benefits of sending the closest available unit to a scene even if it required contracting out when other means were not viable. Neither of which were considered by RFD and DCFD No. 2. The research reflected a pattern showing call volume to be the primary consideration for automatic aid equity. The survey however, showed slightly half of the departments using call volume, at 44%, as the primary consideration for equity. A definite conclusion from this information is difficult at best. Although the literature and Internet review

provided a reasonable time period of research, current information would be best used in drawing a conclusion. The survey itself lacked adequate information to provide a clear picture as to what is actually being used for automatic aid equity in other jurisdictions.

Campbell (1992) reported that only 60% of the fire departments nationwide were utilizing automatic aid. He also showed 82% of the fire departments were not using the closest available units in the automatic aid agreements. The survey performed by Campbell is over 10 years old and no longer consistent with the small survey taken in Oregon by this author. The results of that survey showed 95% of the departments utilized automatic aid. The true numbers nationwide have increased and are somewhere between 60% and 100%.

Many authors stressed the importance and benefits of quick responses by emergency units to the scenes of emergencies. However, it is not so unusual for jurisdictional boundaries to be influenced by political pressures. The question presented by the public at the City of Twinsburg's Committee of the Whole meeting in 2001 and the Roseburg City Council during a study session in 1979, and addressed by Granito (1993), was why should taxpayers provide services to another community when it's difficult enough to protect one's own jurisdiction? This question was repeatedly answered within this research as the reciprocal benefits received when needed from another jurisdiction. Smith (2002) wrote of it as an insurance policy. It was found in the survey that one department used functional consolidation extensively and shared many in-kind services with a neighboring jurisdiction. This department did not document these agreements in writing out of fear that political misunderstandings might surface. Rather than explain why this department was responding out of its area to provide the closest available unit and elaborate on the benefits provided by the neighboring department, it chose to cooperate in secrecy.

Many examples were found where automatic aid resolved department needs. It was

noted in the example presented by the City of East Moline (2002) that automatic aid was to provide the benefit of additional ISO rating calculations and the use of a RIT unit. The City of Fortworth (2002) was to benefit by utilizing an automatic aid agreement for fire emergencies, EMS emergencies, and Hazardous Materials and Technical Rescue teams. PBCSD (2002) was entering into an agreement sharing equipment, apparatus and personnel for structural and wildland firefighting. Carter (2000) wrote of the most common misuse of automatic aid and the sharing of resources by providing the example of the aerial ladder truck. He illustrated the enormous expense that one department incurred by providing an aerial ladder truck where the neighboring department did not offer a reciprocal arrangement. Carter considered this department a "*mutual aid mooch"*.

These examples show not only benefits and reasons to maintain an automatic aid agreement, they are also options for maintaining equitability in the agreement. Furey (1994) recommended placing a value on all of a department's components. Carter's (2000) share and share alike approach, suggested jurisdictions could find common ground in meeting an equitable solution to automatic aid while continuing to benefit from all of its advantages.

Lavote (1996) and Sybesma (1991) offered additional options in maintaining equitability with the recommendations of jurisdictions sharing in-kind services and functional consolidation. Coleman and Granito (1988) recommended exchanging one type of aid for another. The options presented are only limited to the imaginations of those searching for solutions.

The fact that the 1996 automatic aid agreement *final draft* was never officially signed or evaluated, yet implemented, doomed it to failure. Granito (1991) wrote of the careful planning, cooperation and good will necessary to implement an automatic aid agreement. Lavote (1996) produced a checklist to determine what resources may be functionally consolidated between jurisdictions. This would require regular maintenance as each jurisdiction altered its resources.

Francis (1997) emphasized the expectations and fiscal elements of an agreement and suggested to provide a documented orientation session for all of those implementing the plan. NFPA (2001) defined further the importance in ironing out specific issues such as liability for injuries and deaths, disability retirements, cost of service, authorization to respond, and staffing and equipment levels. This level of planning was found to be unusual for successful automatic aid agreements and is a significant difference from what had been written in the past by RFD or DCFD No. 2. The survey revealed that 72% of the fire departments had regularly updated their automatic aid agreements. For RFD and DCFD No. 2 to continue such an agreement, or to succeed in one, will be necessary to revisit the 1996 automatic aid *final draft* and make significant changes, evaluate those changes and revisit the agreement upon each operational change made by either jurisdiction.

Author's interpretation of study results and organizational implications

This research confirmed what had long been suspected–that the automatic aid agreement between RFD and DCFD No. 2 had suffered from neglect and both jurisdictions were impacted by significant operational changes. Granito (1991) and Francis (1997) made it abundantly clear that an automatic aid agreement does not operate automatically and without expectations or evaluations. NFPA (2001) illustrated the need for RFD and DCFD No. 2 to write a more specific agreement that would address areas never considered before by either organization.

The literature was clear and consistent in demonstrating the benefits of automatic aid. The literature, survey and Internet review gave evidence that use of automatic aid agreements had increased over the past few years encompassing all aspects of the fire service. No longer are automatic aid agreements limited to structure fires. The NFPA has acknowledged the value of automatic aid and recommended it as a solution to many fire departments needs. It was surmised by this author from the trends found in this research that mutual and automatic aid was utilized

more on the west coast of the United States than what was found on the east coast. A possible explanation, based on nothing more than conversations with other fire chiefs, was that the east coast was more tradition bound in solving their problems within their own jurisdictions as well as the historical need by the west coast to amass an immediate firefighting force to combat wildland fire emergencies. These emergencies require mutual and automatic aid agreements in place prior to their need. The literature was direct in stating that there was a strong need for both jurisdictions entering into an automatic aid agreement bring something to share. The mechanisms available in making the playing fields equal are numerous and limited to the efforts and imaginations of the fire officials drafting them. Mutual and reciprocal automatic aid agreements that were originally written in 1975 and 1993 between RFD and DCFD No.2 fostered good relations and attitudes between the departments. Organizational changes and the narrow options that were chosen by the jurisdictions had limited the resources available through a more cooperative effort and agreement.

The viability of an automatic aid agreement to exist beyond fire emergencies for RFD and DCFD No. 2 will require both jurisdictions to come to the table with clear expectations and open minds. Since neither department has the depth, or the ability to be independent of the other, an automatic aid agreement that is fair and reasonable to both parties is a necessity. The EMS changes DCFD No. 2 has made regarding ambulance transport will need to be explored and the impact to the RFD measured. DCFD No. 2's reliance on RFD's aerial ladder truck, and standby for training and ambulance move-ups will need to be evaluated. The in-kind sharing and functional consolidation options provided in the literature are possible solutions to the call volume inequities found in the unique characteristics shared by the two jurisdictions.

Creative partnering should provide a level of service to where the public sees no jurisdictional boundaries. Political solutions that are equitable, mutually beneficial and

understandable can be agreed upon by open minds. In looking back at the history of the two departments, consolidation and merger studies have been initiated on five separate occasions. It was written by Johnson and Snook (1997) that automatic aid was a first step toward a more permanent cooperative effort through consolidation, merger, or contracting. Sybesma (1991) wrote that the first step of an automatic aid agreement would require mutual trust, respect, shared goals and agreed-upon expectations. These components are the foundation for a successful automatic aid agreement. Francis (1997) stressed the importance of the agreement being thoroughly reviewed, approved, and having all personnel with action assignments participate in a documented orientation session to assure an understanding of their responsibilities under the agreement. Maintenance of the agreement would be as important as the initial implementation. Let history be a lesson here, modifications should be made to reflect all operational changes made by either jurisdiction. Granito (1991) offered that both parties must have a say in the formation or modification of the plan in order to have buy-in. "The degree and quality of local plan processing corresponds directly to the degree of cooperation and the quality of decision-making during a crisis" (p. 52). Automatic aid appears to be a part of the fabric of cooperative agreements between neighboring jurisdictions and is one that is a necessity during these fiscally challenging times. The level of participation and sharing of resources by each jurisdiction will be determined by the importance placed on the organization's need, or requirements, to provide efficient and effective emergency services.

RECOMMENDATIONS

The problem that prompted this research project is that changes in operations in both RFD and DCFD No. 2 have resulted in difficulties with the automatic aid agreement, and have created a need to re-examine its operational effectiveness and adjust it. The purpose of this

research is three fold: (1) Identify the operational changes and the impact they have had on the current automatic aid agreement, (2) determine if an automatic aid agreement remains to be a viable option to the departments, and (3) to identify equitable and reciprocal solutions to current operational needs.

Based upon this research the following recommendations are offered: RFD and DCFD No. 2 should revisit the 1993 and 1996 *final draft* automatic aid agreements. The research showed strong support for automatic aid to extend beyond structure fires and into all aspects of the fire service. The viability of automatic aid was found to be stronger now than ever before. RFD and DCFD No. 2 need to evaluate those areas in which automatic aid may enhance the level of service either department is currently providing. This can include, yet is not limited to, providing the closest available unit, special teams and equipment, apparatus, training, purchasing, personnel and expertise. All functions of the fire department should be on the table and open for discussion as a means to provide effective and efficient service levels. Using the Lavote (1997) model for identifying functional consolidation is an excellent starting point for evaluation. This would include (a) identifying the strengths and weaknesses of the protection system; (b) identifying the neighboring jurisdiction's resources that could help address your weaknesses; (c) determining which of your strengths could address weaknesses in neighboring jurisdictions; and (d) determining if there is a duplication of effort or resources between multiple jurisdictions that could be identified and addressed by functional consolidation.

The second recommendation would be to place a value on all resources and procedures and then begin the process of negotiation. For example, if providing the closest available unit required requesting a neighboring department's response into your area, a value should be placed on this request. The value of this request should take in account the frequency of use, on-scene time and equipment and the number of personnel sent. On the other hand, the department

providing the request may evaluate the cost incurred. This cost may include the equipment, personnel, reduction of response reliability within its own boundaries, and the political impact. Historically, the negotiations measured only response volume and time on scene data to determine equity. The research has brought forth numerous options to consider that extend far beyond call volume and on-scene times. These may include use of special equipment and apparatus, in-kind sharing like training, arson investigation, use of special teams, purchasing agreements, stand-by time, and anything else of value. If these options are not attractive then contracting-out may be an alternative solution. This would put a monetary value on a resource. The department requesting the resource would pay the remainder from the tax collected to provide a defined level of service. This level of service may be defined in the NFPA firefighting standards. Contracting may be difficult for the taxpayer to understand, but businesses operate in this manner on a daily basis.

The third recommendation is to utilize the criteria set forth in the project management portion of the Executive Planning course offered at the National Fire Academy. The criteria for managing a project such as this will provide the outline to define, plan and implement an automatic aid agreement. So as to not repeat history, the basics of the agreement should follow the recommendations of Coleman and Granito (1988) which include:

> (a) The community has incorporated the lessons learned from the past and from others; (b) the plan is kept updated and the people prepared; (c) the plan's precepts are practiced in day-to-day operations; (d) the plan's special conditions are practiced regularly in a realistic, *all-parties-involved* exercise; and (e) the network of working relationships among all resources are maintained (p.345).

Carter (1995) adds to these basics with questions that must be answered when entering into an agreement. They include (a) who is to respond, (b) what equipment and staffing is to be used,

(c) when the automatic aid will be used, and (d) how the forces are to be employed and under whose command. The NFPA (2001) 1710 standard recommends including written criteria that has never been addressed before by RFD and DCFD No. 2. This would embrace such issues as liability for injuries and deaths, disability retirements, cost of service, and the authorization to respond.

Following these recommendations should maximize the organization's fire service resources and eliminate unnecessary duplication of services. The research found that automatic aid has numerous benefits to offer and should be maintained, and not neglected. As the two fire departments change like the dramatic change in EMS responses, so should the automatic aid agreement. If both departments subscribe to a cooperative, fair and reciprocal agreement the public becomes the true benefactor.

This author strongly recommends communicating with similar organizations and departments outside Roseburg. Other fire department experiences and successes can be of great value to the RFD. *Future readers* may want to expand the scope of research by performing a larger survey limited to municipalities that are surrounded by fire districts. The increase in EMS emergencies and the unique characteristic of the City of Roseburg in having a fire district's borders closer to the city fire stations, than a fire districts own stations requires challenging opportunities for fire officials to find a balance. *Future readers* may want to further explore the EMS dynamics offered by other departments. It was found that departments relying on automatic aid for fire emergencies only, typically had fewer fire emergencies. They did not have to consider the volume of calls an automatic aid agreement containing EMS has. This situation presented an overwhelming inequality of responses between RFD and DCFD No.2. If reinstating the closest available unit is mutually agreed upon as being of value to DCFD No. 2, it will require creative and cooperative work by both organizations.

REFERENCE LIST

American Psychological Association. (1994). *Publications manual (4th ed.).* Washington, DC: American Psychological Association.

Campbell, J. (1992, November). Fire department preparedness results of a national survey. *Fire Engineering, 145*, 39-48.

Carter, H. R. (1995, May). One chief's view of mutual aid: A guide to future operational success. *Firehouse, 20*, 28-31.

Carter, H. R. (2000, May 5). Beware the mutual aid mooch. 1-3. Retrieved December 5, 2002 from the World Wide Web: http://www.monmouth.com/~hcarter/2000/May_2000/may_5,_2000.htm.

Carter, H. R., & Rausch, E. (1989). *Management in the fire service.* (2nd ed.). Quincy, MA: National Fire Protection Association.

Church, R., Corrigan, W., & Sorensen, P. (2001). Manpower deployment in emergency services. *Quarterly Review of Fire Technology, 37,* 219-234

City of East Moline, Illinois. (2002, August 19). Meeting of the mayor and committee, automatic mutual aid agreement. 1-3. Retrieved December 8, 2002 from the World Wide Web: http://www.eastmoline.com/planning/government/CommitteeMinutes/2002-08-19.shtml.

City of Fort Worth, Texas. (2002, July 16). Mayor and council communication, automatic mutual aid agreement. 1-5. Retrieved December 7, 2002 from the World Wide Web: http://www.fortworthgov.org/cfwcs/mclivedoc1/html/C19153.htm

City of Roseburg. (1979, August 21). *City council study session.* Roseburg, OR: Author.

City of Roseburg. (2002a). *Approved FY-2002-2003 operating budget.* Roseburg, OR: Author.

City of Roseburg. (2002b). *Oregon all incident reporting system.* Roseburg, OR: Author.

City of Twinsburg, Ohio. (2001, September 18). Committee of the whole meeting minutes, automatic mutual aid agreement. 1-5. Retrieved December 7, 2002 from the World Wide Web: http://www.twinsburg.oh.us/Council/Meetings/2001/Minutes/cw/cw091801m.htm.

Coleman, K. G. (1992, March). The foundation of mutual aid. *Fire Chief, 36,* 51-52.

Coleman, R. J., & Granito, J. A. (Eds.). (1988). *Managing fire services*. (2nd ed.). Washington, DC: International City Management Association.

Cowardin, D. H. (1993, December). Practical ICS automatic aid. *American Fire Journal, 45,* 6-7.

David, F. R. (Ed.). (1987). *Strategic management* (J. Stout). Columbus, OH: Merrill Publishing Company.

Douglas County Dispatch (2003), [Response run cards]. Unpublished raw data.

Evanoff, T. (1979, August 28). Automatic fire aid ends in confusion. *The News-Review, 110,* 2.

Folk, D. (1975, September 27). Mutual aid pact rules explained. *The News-Review,106,* 1.

Francis, A. A. (1997). Mutual aid: not just any duck will do. *ASPEP Journal,* 31-33.

Granito, J. A. (1991, March/April). Making mutual aid agreements work. *NFPA Journal, 85,* 49-52.

Granito, J. A. (1993, May/June). Joining forces for affordable protection. *NFPA Journal, 87,* pp. 30, 100.

Harper, P. (2001, March). Corporate fires. *Executive Excellence, 18,* 15.

Jenaway, W. F. (1993, March). The rural pre-plan. *Firehouse, 18,* 26-28.

Johnson, J. D., & Snook, J. W. (1997). *Making the pieces fit.* (M. J. Wagner). West Linn, OR: ESCG.

Lavote, K. (1996, May). A shared interest. *Fire Chief, 40,* 95-96.

National Fire Academy. (2002, August). *Executive planning.* (NFA-ED). Emittsburg, MD: Author.

National Fire Protection Association. (1997). Fire department administration and management. *Fire Protection Handbook.* (18th ed.). Quincy, MA: National Fire Protection Association.

National Fire Protection Association. (2001). Standard for the organization and deployment of fire suppression, emergency medical operations and special operations to the public by career fire. *Standard1710.* Quincy, MA: National Fire Protection Association.

Pebble Beach Community Service District. (2002, March 29). Board of directors meeting, automatic mutual aid agreement. 1-8. Retrieved December 7, 2002 from the World Wide Web: http://www.pbcsd.org/agendas/Min02Mar29.htm.

Roseburg's standards of coverage for emergency response, res. 03, City Council, (2002, March 20).

Roseburg Fire (2003a), [Emergency response log]. Unpublished raw data.

Roseburg Fire (2003b), [Stand-by log]. Unpublished raw data.

Sacramento Metropolitan Fire Department. (2001, June 6). Board of director's meeting minutes, automatic mutual aid agreement. 1-8. Retrieved December 8, 2002 from the World Wide Web: http://www.smfd.ca.gov/m06_06_01.htm.

Smith, J. (2002, October 19). Going above ground requires discipline and fundamentals. *Firefighting.com.* 1-2. Retrieved December 7, 2002 from the World Wide Web: http://www.firefighting.com/articles/namFullView.asp?namID=6874

Sybesma, P. (1991, March/April). Breaking the boundaries of fire protection. *NFPA Journal, 85,* 104-109.

Thomas, J. (1994, March). When one plus one make one. *Fire Chief, 38,* 105-106.

Thompson, S. (1992, April). Spotting a trend: Fire department consolidation. *American City and County*, 25-29.

APPENDIX A

OAIRS data

Automatic Aid Given to DCFD No.2 by RFD - 1/1/97 To 2/28/02

Year	Alarms
1997	109
1998	143
1999	196
2000	183
2001	202
2002 (Jan. & Feb.)	48
Total	**881**

	Alarms	Minutes/alarm	Hours
Fires	**281**	**42**	**197**
Other	**600**	**25**	**250**
Total	**881**	**-**	**447**

Table A1. The table shows the year and the number of alarms RFD gave automatic aid to DCFD No. 2 from January 1, 1997 to February 1, 2002 (City of Roseburg, 2002b).

OAIRS data

Automatic Aid Given to DCFD No. 2 by RFD - 3/1/02 TO 12/31/02

Year	Alarms
2002 (March-Dec.)	108
Total	**108**

	Alarms	Minutes/alarm	Hours
Fires	**48**	**46**	**37**
Other	**60**	**13**	**16**
Total	**108**	**-**	**53**

Table A2. The table shows the number of alarms RFD gave automatic aid to DCFD No. 2 from March 1, 2002 to December 31, 2002 (City of Roseburg, 2002b).

OAIRS data

Automatic aid Received From DCFD No. 2 for RFD -1/1/97 TO 2/28/02

Year	Alarms				
1997	42				
1998	45				
1999	41				
2000	37				
2001	60		**Alarms**	**Minutes/alarm**	**Hours**
2002 (Jan. & Feb.)	11	**Fires**	**120**	**30**	**60**
		Other	**116**	**5**	**10**
Total	**236**	**Total**	**236**	**-**	**70**

Table A3. The table shows the year and the number of alarms automatic aid was received from DCFD No. 2 for RFD from January 1, 1997 to February 1, 2002 (City of Roseburg, 2002b).

OAIRS data

Automatic Aid Received from DCFD No. 2 for RFD - 3/1/02 TO 12/31/02

Year	Alarms		Alarms	Minutes/alarm	Hours
2002 (Feb.-Dec.)	34	**Fires**	**22**	**30**	**11**
		Other	**12**	**5**	**1**
Total	**34**	**Total**	**34**	**-**	**12**

Table A4. The table shows the number of alarms automatic aid was received from DCFD No. 2 for RFD from March 1, 2002 to December 31, 2002 (City of Roseburg, 2002b).

APPENDIX B

Automatic Mutual Aid Survey

Instructions: The following are questions associated with Automatic Mutual Aid. Please circle or fill in the response that best represents your department's operations. This survey is voluntary and your name is not required.

1. Do you currently have a mutual aid agreement with another department, or departments?

Y | **N**

2. Do you currently have an **automatic** mutual aid agreement with another department, or departments?

Y | **N**

3. Does your automatic mutual aid agreement include?

Y | **N**

Fire Emergencies

Y | **N**

Special Equipment

Y | **N**

Specialized teams

Y | **N**

EMS Emergencies

Y | **N**

4. Do you FEEL that your automatic mutual aid agreement is equitable? (Equally reciprocal)

Y | **N**

5. Is your automatic mutual aid agreement equitably based on the type and volume of responses?

Y | **N**

6. Is your automatic mutual aid agreement equitable because of other mutual agreements?

Y | **N**

7. Do you regularly update your automatic mutual aid agreement?

Y | **N**

8. Is your automatic mutual aid agreement a primary consideration for your ISO rating?

Y | **N**

9. Is your automatic mutual aid agreement a primary consideration for closest available unit?

Y | **N**

10. If you use other agreements to maintain equitability what are they? Please list

APPENDIX C

Survey results

Number	Question	YES	NO	UNSURE
		no. or %	no. or %	no. or %
1	Do you currently have a mutual aid agreement with another department, or departments?	19 or 100 %	00 or 00 %	00 or 00%
2[a]	Do you currently have an automatic mutual aid agreement with another department, or departments?	18 or 95 %	01 or 05 %	00 or 00%
3	Does your automatic mutual aid agreement include?			
3a	Fire Emergencies	18 or 100 %	00 or 00 %	00 or 00%
3b	Special Equipment	13 or 72 %	05 or 28 %	00 or 00%
3c	Specialized teams	11 or 61 %	07 or 39 %	00 or 00%
3d	EMS Emergencies	15 or 83 %	03 or 17 %	00 or 00%
4	Do you FEEL that your automatic mutual aid agreement is equitable? (Equally reciprocal)	14 or 78 %	03 or 17 %	01 or 05%
5	Is your automatic mutual aid agreement equitably based on the type and volume of responses?	08 or 44 %	10 or 56%	00 or 00%
6	Is your automatic mutual aid agreement equitable because of other mutual agreements?	04 or 22 %	12 or 67 %	02 or 11%
7	Do you regularly update your automatic mutual aid agreement?	13 or 72 %	05 or 28 %	00 or 00%
8	Is your automatic mutual aid agreement a primary consideration for your ISO rating?	04 or 22 %	12 or 67 %	02 or 11%

Table continues on following page

[a]A NO answer for question 2 results in all remaining questions being non-applicable.

Table C1. The table shows the number and percentage of 19 Oregon fire departments who responded to the survey.

Survey results Table continued from previous page

Number	Question	YES	NO	UNSURE
		no. or %	no. or %	no. or %
9	Is your automatic mutual aid agreement a primary consideration for closest available unit?	15 or 83 %	03 or 17 %	00 or 00%
[b]10	If you use other agreements to maintain equitability what are they? Please list	03 or 17 %	15 or 83 %	00 or 00%
10a	1Y= Training			
10b	2Y= Inter-governmental Agreement –share a fire station			
10c	3Y= Training, maintenance, station coverage and purchasing partnerships.			

Table C1. The table shows the number and percentage of 19 Oregon fire departments who responded to the survey.

[b]The three yes answers to this question are 10a, 10b, and 10c.

774 SE Rose Street
Roseburg, Oregon 97470

Phone (541) 673-4459

APPENDIX D

City of Roseburg

Fire Department
Memorandum

DATE:	February 29, 1996
TO:	
FROM:	Greg Bullock, Division Chief
RE:	FINAL DRAFT OF AUTOMATIC AID POLICY

The attached pages are the final draft of the Automatic Aid policy. Please review and address any questions to me as soon as possible.

Greg Bullock

Greg Bullock

Automatic Aid – Douglas County Fire District # 2

The City of Roseburg and the Board of Director's of Fire District #2 formally agreed to enter into an automatic aid agreement and directed the respective Fire Chiefs to develop a response plan incorporating the resources of both fire departments to provide the best service to the area citizens.

The plan includes responses to first-alarm structure fires, responses to emergencies on I-5, and includes a provision for providing an EMS response by Roseburg engine companies to specific areas in the fire district which can be accomplished in a more timely fashion.

Automatic Aid Responses:

The City and Fire District have been divided into response areas. Corresponding "run cards" identifying the closest fire companies have been provided to Douglas County Communications for dispatching purposes.

First- Alarm Responses:

> Incidents involving reported structure fires normally will require a minimum of three (3) Type I engines, or two (2) Type I engines and a truck company. Commercial responses will have an additional Type I engine dispatched on initial assignment. When all three Roseburg companies are assigned to a first-alarm, an additional engine from District #2 will be dispatched to provide coverage for the City. The auto aid plan will include provisions for providing equipment and manpower on wildlandorinterface fires.

1-5 Corridor Responses:

> Run cards for the 1-5 corridor are keyed to the mile posts and have been developed to provide for a response of apparatus in both a north and south direction. The run cards also identify any additional, special apparatus to be dispatched depending on the type incident (EMS, fire, hazardous material spill).

Response to Medical Emergencies:

> Roseburg fire department apparatus will respond to medical emergencies in specific areas of District #2. These areas will be defined in the addendum to this policy.

"Next Available" Responses:

The current dispatching system incorporates the dispatching of "next available" apparatus when normally assigned apparatus are unable to respond. This may result in fire companies from Roseburg being dispatched to emergencies even though they are not identified as one of the initial responders. The move-ups may be for any type of emergency and will entail all of District #2 response area.

Auto Aid Response Areas:

First Alarm Responses:

Roseburg Fire Department will provide apparatus for first alarm assignments to the entire response area of District #2.

Response to Medical Emergencies:

Roseburg Fire Department will provide apparatus and personnel for EMS assignments in District #2 areas which are identified in the addendum to this Policy.

1-5 Corridor Responses:

Roseburg Fire Department's responsibility for these responses under the current auto aid plan does not extend above milepost 129 or below milepost 119.

WildlandorInterface Fires:

Roseburg Fire Department will respond to wildlandorinterface fires in District #2's areas identified as having an impact on wildlandorinterface areas in the City's response area. These areas are identified in the addendum to this policy.

Staffing Requirements:

It is the intent of the Roseburg Fire Department to provide support and assistance to Fire District #2 under the automatic aid plan. When staffing levels fall below minimum, off-duty personnel will be recalled to staff apparatus to ensure that an adequate response capability is maintained based on the following criteria:

When Roseburg Fire Department personnel, due to the nature of their auto aid assignment or because of the travel distances involved in the response, will be unavailable for response exceeding one (1) hour, a recall of off-duty personnel will be implemented to bring the staffing level in the City to the desired level.

Anytime two (2) or more engine companies are on an auto aid response in District #2 an immediate recall will be made to supplement staffing levels in the City.

Requests for mutual aid from other departments outside of District#2 area will require a recall of off-duty personnel to maintain minimum staffing levels.

Addendum:
Automatic Aid Response Areas

The following is a listing of the currently agreed upon response areas where Roseburg Fire Department personnel and equipment will respond under the automatic aid agreement with Douglas County Fire District #2:

Medical Emergencies:

Booth Street (SE) - east from City limits; including all streets off of Booth Street.

Bower Street (NE) - including Shadow Ranch Lane.

Broad Street (NW) - north from City limits; including all streets off of Broad Street.

Lookingglass Road (W) - south from City limits to Taber Lane

Military Road (W) - a of Military Road

Ramp Road (SE) - including Eagle Rest

Stephens Street (NE) - south from NE General Street to City limits, including Newton Creek subdivision.

Stephens Street (SE) - south from City limits, along Old Hwy 99 to Sun Studs.

Wildland Interface

Response to San Souci Drive and Old Melrose Road, Type I engine for structure protection.